

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claims 16 – 17, 19 – 32 are pending in this application. Claims 1 – 15 and 17 – 18 have been canceled without prejudice. Claims 16 and 31 are currently amended. Support for the claim amendments is found in the previously presented claims and specification generally, for example, at paragraphs 56-59. Applicants respectfully submit that no new matter has been added by the amendments.

PRIORITY CLAIM

Applicants noted in their December 7, 2009, response that the Office Action did not indicate that the claim to foreign priority under 35 U.S.C. §119 has been acknowledged or that certified copies of all priority documents have been received by the U.S.P.T.O. Applicants again respectfully request that the Examiner's next communication include an indication as to the claim to foreign priority under 35 U.S.C. §119 and an acknowledgement of receipt of the certified copies of all priority documents.

DRAWINGS

Applicants noted in their December 7, 2009, response that the Office Action did not indicate that the drawings have been accepted by the Examiner. Applicants respectfully request that the Examiner's next communication include an indication as to the acceptability of the filed drawings or as to any perceived deficiencies so that the Applicants may have a full and fair opportunity to submit appropriate amendments and/or corrections to the drawings.

Rejections under 35 U.S.C. § 112

Claims 16 and 19 – 26 and 28 – 31 are rejected under 35 U.S.C. § 112, 1st paragraph, as failing to comply with written description.

Specifically, the Examiner states the new amendment to the claims of “coating film is between about 3% and about 7%” is not supported by the specification. Office Action at page 2. The Examiner notes that the specification recites at least 3%, and at least 5%. *Id.* However, in light of the current claim amendments, Applicants believe the claims as amended render this rejection moot. As such, Applicants respectfully request this rejection be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 16 and 19 - 32 are rejected under 35 U.S.C. § 102(b), as being anticipated by Autant et al. (6,022,562), hereafter “Autant”.

Applicants respectfully traverse this rejection for the reasons detailed below. Withdrawal of the rejections and allowance of the claims are respectfully requested.

Applicants would like to take this opportunity to indicate that the Autant reference (provided on 02/03/2010 in an IDS as an English equivalent of a Japanese reference cited during prosecution in Japan of the corresponding application), is the same application as WO 96/11675, cited in the current US specification. See in particular paragraphs [0018] and [0019].

Because the hallmark of anticipation is prior invention, the prior art reference - in order to anticipate under 35 U.S.C. § 102 - must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements “arranged as in the claim.” *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (emphasis added).

Autant does not teach all elements of the claims, much less elements as arranged in the claim. It is stated in paragraph [0019] of the instant specification that “*the multimicrocapsular system according to WO 96 /11675 is perfectible as regards APs with low solubility that can be*

administered orally, since it does not propose any solution to the problem of the diffusion of such an AP with low solubility through a coating film of sufficiently large thickness, for example of several microns.” To solve the above problem is precisely what the present inventors have endeavored. Autant (Col. 11, lines 47+) mentioned the possible recourse to an agent modifying the intrinsic solubility feature of the Active Principle.

But the Applicant respectfully disagrees when the Examiner (Office Action page 5, top) concludes that the microcapsules disclosed by Autant anticipated the microcapsules recited in the instant claims.

The Examiner alleges, in Office Action page 5, that Autant anticipated the microcapsules recited in the instant claims, in particular because they contain PVP such as in Example 4 of Autant, so that, according to the Office Action, the increase in solubility of the active principle by 50 % would be an inherent feature of Autant compositions.

Applicant respectfully disagrees.

It is to the merit of the present inventors to have identified that the microparticles according to Autant can be improved by several means, in particular by having a core that contains a solubilizing agent with the Active Principle (AP), said solubilizing agent being selected as a function of the considered AP, using the following criterion: when placed in aqueous solution at a concentration of 20 % w/w at 37 °C, the solubilizing agent must increase the solubility of the AP by more than 50 %.

Autant does not provide such a teaching.

Further, Autant fails to teach the selection criterion for the solubilizing agent of the present invention.

Indeed, Applicants have measured the increase in solubility of aciclovir (AP of Example 4 of Autant) in the presence of PVP as described in paragraph 46 and 48 of the present application. The Declaration of Hervé Guillard at Exhibit 1 shows this study. (“Declaration”)

The aciclovir powder is introduced into an aqueous solution of the solubilizing agent PVP at a concentration of 20 % w/w. Declaration at ¶11.

The suspension is stirred at 37 °C for 6 hours; it is then filtered. *Id.*

The amount of solubilized API is assayed by UV spectrophotometry. *Id.*

Aciclovir solubility is found to be equal to 3.3 g/l. *Id.* at ¶11

Repeated operation without PVP yields aciclovir solubility equal to 2.6 g/l. *Id.* at ¶12.

Therefore there is only a 27 % increase in solubility of aciclovir in the presence of PVP according to the test of paragraphs 46 and 48 of the present invention. *Id.* at ¶13.

One of the required characteristics of the present invention is that the solubilizing agent at 20 % w/w must increase the solubility of the AP by more than 50 %.

As a consequence, the teaching of Autant cannot anticipate the microcapsules recited in the instant claims because it does not teach that the solubilizing agent must be selected as a function of the AP so that at 20 % w/w it increases the solubility of the AP by more than 50 %.

There are a number of solubilizing agents that can be used in the present invention, but the criterion of the invention intends to consider only the most efficacious solubilizing agents. For example, PVP increases the solubility of aciclovir, but not to the extent required by the present invention, which is necessary to obtain an industrial product, with a coating film of sufficiently large thickness.

Further, Autant cannot anticipate claim 16 because Autant does not teach a coating where “the mass fraction by dry weight of P1 relative to the total mass of the coating is between 40 and 90%; wherein the mass fraction by dry weight of P2/P1+P2 is between 15 and 60% relative to the total mass of the coating; and wherein the mass fraction by dry weight of PL/P1+PL is between 1 and 30% relative to the total mass of the coating.”

It is to the merit of the present inventors to have discovered this new specific coating composition, which allows the controlled release of poorly soluble APs, with a sufficiently large thickness, so that the release profiles are industrially reproducible.

For at least these reasons, claims 16 and 31 are novel over Autant. Claims 19-26 and 28-30 depend upon claim 16 or 31 and thus contain the same novel claim requirements. Thus, all claims are novel over Autant. Applicants therefore respectfully requests the rejection be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 16 – 17 and 19 - 32 are rejected under 35 U.S.C. § 102(b) as anticipated or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Autant.

Applicants respectfully traverse this rejection for the reasons detailed below. Withdrawal of the rejection and allowance of all claims are respectfully requested.

As noted above, Autant does not teach all elements of the claims:. in particular, for the skilled person in the art, it would not have been obvious from reading Autant to make a composition where the solubilizing agent increases the solubility of the active principle by more than 50% when the solubilizing agent is placed in an aqueous solution at a concentration of 20% w/w at 37 °C and where:

- the mass fraction by dry weight of P1 relative to the total mass of the coating is between 40 and 90%;
- the mass fraction by dry weight of P2/P1+P2 is between 15 and 60% relative to the total mass of the coating; and
- the mass fraction by dry weight of PL/P1+PL is between 1 and 30% relative to the total mass of the coating.

Autant in no way teaches or suggests these claim limitations. As such, Applicants request the rejection be withdrawn. As Claims 19-31 contain the limitations from independent

Claim 16, Applicants respectfully request that the rejection to Claims 16 and 19-32 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned. Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the telephone number of the undersigned below.

Applicant also submits concurrently a Request for Continued Examination pursuant to 37 C.F.R. § 1.114. Please charge our Credit Card in the amount of \$810.00 covering the fees set forth in 37 C.F.R. § 1.17(e). In the event that any additional extensions of time are necessary to prevent the abandonment of this patent application, then such extensions of time are petitioned, the U.S. Patent and Trademark Office is authorized to charge any additional fees that may be required in conjunction with this submission to Deposit Account Number 50-2228, under Order No. 022290.0123PTUS, from which the undersigned is authorized to draw.

Respectfully submitted,

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